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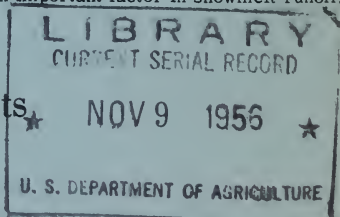


Checking Mountain Soil Moisture Under the Snow, an important factor in snowmelt runoff.

Federal-State Cooperative
Snow Surveys and Water Supply Forecasts
for
Colorado River, Rio Grande,
Platte River and Arkansas River
Drainage Basins

SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
AND
COLORADO AGRICULTURAL EXPERIMENT STATION
AND

STATE ENGINEER OF NEW MEXICO



Data included in this report were obtained by the agencies named above in cooperation with the U. S. Forest Service, National Park Service, Bureau of Reclamation, State Engineers of Colorado and Wyoming; and other Federal, State and local organizations.

— AS OF —
MAR. 1, 1956

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY
AND WATER SUPPLY FORECAST REPORTS:

Snow surveys in the West are conducted each year at more than 1200 snow courses. Basin and Province or State snow survey reports summarizing the results of the measurements and forecasts of seasonal runoff and water supply are issued by the Soil Conservation Service, U. S. Department of Agriculture and some of its co-operators; the Water Rights Branch of the British Columbia Department of Lands and Forests; and the California Division of Water Resources.

Copies of the various federal-state cooperative snow survey reports listed below may be secured by writing to:

Head, Water Supply Forecasting Section
Soil Conservation Service
209 S. W. 5th Avenue
Portland 4, Oregon

BASIN REPORTS:

Colorado, Rio Grande... Issued monthly February through May by SCS and
and Platte-Arkansas Colorado Experiment Station, Fort Collins, Colorado.*
River Basins

Columbia River..... Issued monthly January through May by Soil Conserva-
Basin tion Service, Boise, Idaho.*

Upper Missouri..... Issued monthly February through May by SCS and
River Basin Montana Agricultural Experiment Station, Bozeman,
Montana.*

West-Wide Water..... Issued April 1 by Soil Conservation Service and
Supply Outlook Cooperators, Portland, Oregon.

STATE REPORTS:

Arizona..... Issued semi-monthly January 15 through April 1 by SCS
and Salt River Valley Water Users Association, Phoenix,
Arizona.*

Nevada..... Issued monthly February through April by SCS and
Nevada State Engineer, Reno, Nevada.*

Oregon..... Issued monthly January through May by SCS, Portland,
Oregon, and Oregon Agricultural Experiment Station.*

Utah..... Issued monthly January through May by SCS, Salt Lake
City, Utah, and State Engineer of Utah and Utah Agri-
cultural Experiment Station.*

Washington..... Issued monthly February through May by SCS, Spokane,
Washington, and State Department of Conservation and
Development.*

Wyoming..... Issued monthly February through May by SCS, Casper,
Wyoming, and State Engineer of Wyoming.*

*Special reports are issued as needed.

The British Columbia reports are issued February 1 through June 1 and may be secured from Comptroller, Water Rights Branch, Department of Lands and Forests, Parliament Buildings, Victoria, B. C.

The California reports are issued monthly February 1 through May 1 and may be secured from Division of Water Resources, California Department of Public Works, Sacramento, California.

The annual water supply forecasts of the Weather Bureau are available in monthly bulletins published from January through May. These bulletins entitled, "Water Supply Forecasts for the Western United States" may be obtained from River Forecast Center, Weather Bureau, 712 Federal Office Building, Kansas City 6, Missouri.

FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND WATER SUPPLY FORECASTS

for

COLORADO RIVER, PLATTE RIVER
ARKANSAS RIVER AND RIO GRANDE
DRAINAGE BASINS

Issued

March 8, 1956

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State of New Mexico

(General Series Paper No. 633)
Colorado Agricultural Experiment Station

- (1) Snow Survey measurements in Wyoming, Utah, and Arizona are supplied by Snow Survey Leaders in these states.

WATER SUPPLY OUTLOOK
COLORADO RIVER, PLATTE RIVER
ARKANSAS RIVER AND RIO GRANDE
March 1, 1956

The water supply outlook for southern Wyoming and most of Colorado is much improved over the past two years with snow melt streamflow expected to be well above average except for the Rio Grande. Less than normal flow is in prospect for the Rio Grande in New Mexico. In Arizona snowfall has been light with snow melt streamflow forecast at less than 50 percent of normal.

Irrigation water supply outlook for most of Colorado continues to be much improved over the past two years as of March 1. In the northern mountains of the state, including the headwaters of the Platte, Upper Colorado and Yampa Rivers, the snow pack is 150 percent of normal. Measurements on most snow courses on these watersheds show a snow water content near a record high for this time of year. They are comparable to the recent high snow years of 1949 and 1952.

Unfortunately, this favorable water supply outlook does not extend throughout the state of Colorado and to adjacent areas in northern New Mexico. To the west the snow pack decreases to 100 to 125 percent of normal on the Grand Mesa and on the Dolores and San Juan Rivers in southwestern Colorado. On the headwaters of the Rio Grande, Conejos and Alamosa Rivers snow cover to date ranges from near normal to 20 percent above normal. To the east of San Luis Valley in the Sangre de Cristo Range there was practically no snow during February and the total seasonal snow pack is 80 percent of normal. Further declines were measured in northern New Mexico.

A relatively heavy snow occurred in a short period in the mountains of Arizona during February which has slightly improved the outlook for snow melt season on the Salt and Gila Rivers. Spring runoff is not expected to exceed one-half of normal for any watershed in the state. Prospects for the Gila and Salt Rivers and their tributaries are better than for the Little Colorado and William Rivers.

Snow cover in the Colorado River drainage in Utah ranges from well above normal on the Green River tributaries in the northern part of the state to less than normal on the Virgin River in southern Utah. The decrease in seasonal snowfall is relatively constant from north to south along the Colorado River-Great Basin divide. On the headwaters of the Green River in Wyoming the snow pack is 125 percent of normal. Other conditions favor a well above normal runoff from this stream in 1956.

NORTH PLATTE

The March 1 snow pack on the North Platte drainage in Colorado and Wyoming is 35 percent above normal for this date which represents an improvement in outlook over a month ago. Soil moisture under the snow is above normal in Wyoming and near normal along the Continental Divide in Colorado. The snow pack is nearly the same as for the heavy snow year of 1952. The possibility of a summer runoff in the range of that for 1952 is fairly remote. However, the inflow to the North Platte reservoirs is expected to exceed any other year of recent history except 1952. Storage in the four major reservoirs is now about 900,000 acre-feet as compared to 962,000 on March 1, 1955. Of this amount 725,000 acre-feet is assigned to the Kendrick project. Soil moisture conditions in the lower North Platte Valley of eastern Wyoming and western Nebraska are good but fair to poor in the upper valley.

On the Laramie River moisture conditions in the Laramie and Wheatland areas are fair to poor. The snow pack on the Laramie watershed is near a record high, and runoff should be well above normal during the next irrigation season.

SOUTH PLATTE

The seasonal snow pack is 150 percent of normal on all of the South Platte tributaries. Snow water content measured on most snow courses approach that for the year 1952. This represents an increase in estimates of streamflow over surveys made on February 1. If mountain snowfall through the remainder of the snow season is normal or above streamflow on all tributaries should be only slightly less than that experienced in 1952.

The favorable snow pack and runoff estimates does not represent the entire outlook for 1956. To detract somewhat from this favorable picture is the lack of reservoir storage. Storage in smaller irrigation reservoirs on the upper tributaries as well as on the lower South Platte is above March 1, 1955 but is substantially short of average carryover. With the good streamflow outlook, this shortage of stored water is decreasing in importance. In the Colorado-Big Thompson system the shortage of water is more acute. Usable storage in this system now totals 209,000 acre-feet as compared to 325,000 a year ago and over 500,000 on March 1, 1954. It is probable that total storage will increase during this water year. Storage in Denver municipal reservoir is down slightly from a year ago and less than one-half of normal.

Surface soil moisture in irrigated areas is much improved over the past two years but subsoil is dry as a result of a dry fall. Winter streamflow is reported as below normal.

ARKANSAS

The water supply outlook for the Arkansas River is much improved over the past two years. Snow pack on the headwaters of the stream near Tennessee and Fremont Passes is near 150 percent of average. This percentage declines rapidly to just above normal at Monarch Pass. Snow cover on the Sangre de

ARKANSAS (Continued)

Cristo Range declined during February and is now about 80 percent of normal, lower than any other area in Colorado. Snowfall in irrigated areas has been relatively light and soils are dry. The flow of the main stem of the Arkansas River will be slightly above normal at Salida and near normal from Pueblo downstream. About one-half normal runoff is expected from the southern tributaries, the Cucharas, Huerfano and Purgatoire Rivers. Storage in upstream and plains reservoirs has improved over a year ago but is well below the average. There is 55,000 acre-feet of storage remaining in John Martin Reservoir of the over 200,000 acre-feet stored during the flood of May 1, 1955.

COLORADO

The water supply outlook for all areas of western Colorado and Wyoming is good. Snow pack on the headwaters of the Green River in Wyoming, the Yampa, White and Upper Colorado in Colorado and on the Uinta Mountains of Utah ranges from 125 to 150 percent of normal. Along the Continental Divide in northern Colorado snow measurements are near those for March 1, 1952.

The snow cover in respect to normal declines to the south and west in Colorado and Utah to near normal on the San Juan and Dolores drainages of southwestern Colorado and less than normal in southern Utah. On the Upper Colorado and Yampa Rivers heavy snowfall has occurred and remains on the ground at elevations down to 7,000 feet. Elsewhere snow has melted and surface soils are wet. Irrigation water supplies should be more than adequate for areas served by main streams. Shortages may occur in irrigated areas along tributary streams if the late summer months are dry. If snowfall for the remainder of the season is deficient, the flow of the Dolores and San Miguel Rivers may be less than normal.

Except for Green Mountain Reservoir, a part of the Colorado-Big Thompson system, storage in major west-slope reservoirs is below a year ago. Prospects for improving storage is good.

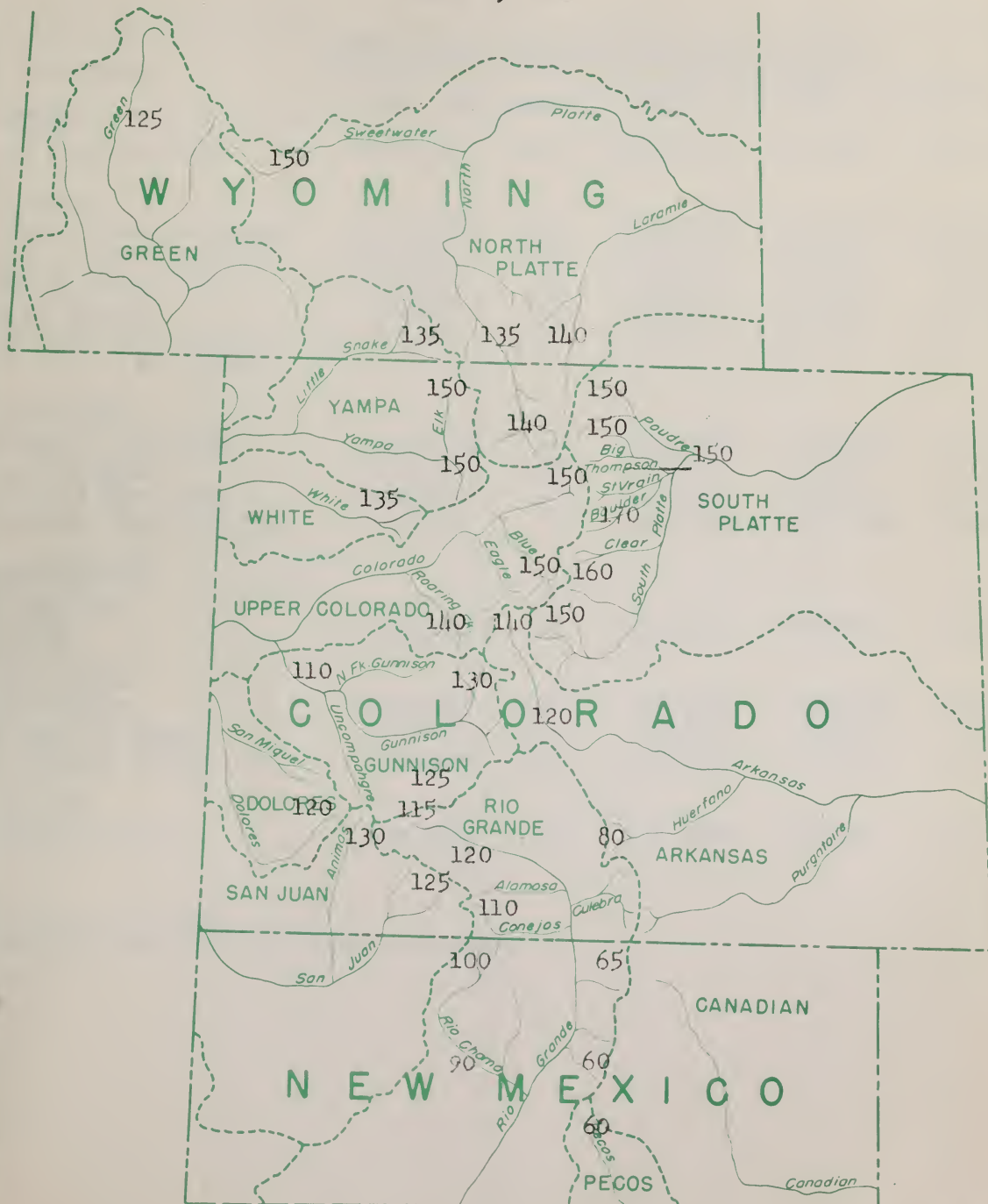
Inflow to Lake Mead will most probably be about 115 percent of normal during the April-September, 1956 period. Inflow will probably be more than for the last two years combined but less than for 1952.

Storms during February made a substantial improvement in water supply outlook in Arizona but spring runoff is not expected to exceed one-half of normal on any stream in the state. Soil moisture conditions at high elevations are very good and runoff is expected to be better than the existing snow packs would indicate. The greatest improvement in snow pack has been on the Salt and Gila watersheds with less on the Little Colorado, Verde and Williams Rivers.

Storage on the Salt River reservoir system is about 90 percent of average and one-third of capacity. In San Carlos there is now 76,000 acre-feet in storage which is twice that of a year ago but only 44 percent of the 15-year average.

WATER CONTENT OF SNOW ON THE WATERSHEDS OF
PLATTE, ARKANSAS, UPPER COLORADO AND RIO GRANDE BASINS
BASED ON SNOW SURVEYS MADE APPROXIMATELY FIRST DAY OF MONTH

In Percent of Normal
March 1, 1956



COOPERATIVE SNOW SURVEYS

Stream flow Forecasts for March 1, 1956

BASIN AND STREAM	April-Sept., Incl., Streamflow Acre Feet					15 year Avg. 1938-52
	Forecast	% of	Measured Runoff			
	1956	15 yr. Avg.	1954	1953		
GREEN						
Green at Linwood, Utah	1,600,000	123	1,011,000	957,000	1,302,000	
COLORADO						
Colorado at Glenwood Springs	2,000,000**	130	830,000**	1,413,000**	1,540,000**	
Gunnison at Grand Junction	1,600,000	106	342,000	953,000	1,510,000	
San Juan at Rosa, N. M.	650,000	92	352,000	370,000	703,000	
Animas At Durango	500,000	96	300,000	315,000	522,000	
Colorado near Grand Canyon- Ariz.	11,750,000	114	4,006,000	5,447,000	10,063,000	
RIO GRANDE						
Rio Grande at Del Norte	525,000**	97	294,000**	302,000**	565,000**	
Conejos at Mogote	225,000	103	117,000	143,000	219,000	
Rio Chama at Park View	205,000	90	108,000	114,000	230,000	
Rio Grande at Otowi Bridge	575,000	69	196,000**	265,000**	835,000**	
NORTH PLATTE						
North Platte at Saratoga	900,000	137	234,000	428,000	657,000	
SOUTH PLATTE						
Poudre at Canon	275,000*	125	75,000*	114,000*	220,000*	
Saint Vrain at Lyons	110,000	125	30,000	61,000	88,000	
Clear Creek at Golden	200,000*	142	52,000*	117,000*	141,000*	
ARKANSAS						
Arkansas at Salida	375,000*	116	158,000*	320,000	323,000*	

* Excluding Diversions

** Including Diversions and change in storage

STATUS OF RESERVOIR STORAGE, MARCH 1, 1956

BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (THOUS.A.F.)	USABLE STORAGE--1000 ACRE FEET			
			1956	1955	1954	15-year Avg. 1938-52
MISSOURI RIVER						
Poudre River	Windsor	18.6	3.3	2.8	4.5	9.5
" "	Cache la Poudre	9.5	4.5	4.0	5.4	6.4
" "	Fossil Creek	11.6	4.5	2.8	4.8	6.7
" "	Terry Lake	8.2	7.2	2.8	4.1	4.2
" "	Halligan	6.4	2.9	2.3	1.8	1.7
" "	Chamber's Lake	8.8	1.2	1.2	1.2	2.4
" "	Cobb Lake	34.3	0.0	0.0	7.0	4.6
" "	Black Hollow	8.0	0.9	0.9	3.4	3.3
" "	Horsetooth	143.5	51.4	83.9	119.0	—*
Big Thompson River	Lake Loveland	14.3	7.2	4.9	7.6	4.4
" " "	Boyd Lake	44.0	0.0	0.0	8.7	16.0
" " "	Lone Tree	9.2	8.2	6.4	7.0	5.3
" " "	Mariano	5.4	0.6	0.3	3.0	2.1
" " "	Carter Lake	112.4	44.6	54.0	75.5	—*
St. Vrain River	Union	12.7	1.6	1.0	6.1	6.8
South Platte River	Eleven Mile	81.9	24.4	17.3	81.9	75.5
" " "	Cheeseman	79.0	23.3	23.9	26.7	55.3
" " "	Marston	18.9	14.2	13.0	15.4	14.7
" " "	Barr Lake	32.2	16.6	12.6	15.1	19.7
" " "	Milton	24.4	0.5	0.0	3.9	10.5
" " "	Standley	18.5	7.8	0.0	6.3	10.8
" " "	Marshall	10.3	1.1	0.0	0.6	2.3
" " "	Antero	33.0	0.0	10.2	10.2	13.8
" " "	Horse Creek	20.6	9.5	13.3	9.9	9.0
" " "	Riverside	57.5	21.0	17.6	40.9	43.2
" " "	Empire	37.7	17.9	6.5	28.1	27.8
" " "	Jackson Lake	35.4	31.9	26.5	33.2	31.1
" " "	Prewitt	32.8	0.0	7.0	11.2	21.0
" " "	Point of Rocks	70.0	35.8	30.4	46.3	51.4
" " "	Julesburg	28.2	19.8	21.2	21.2	20.3
North Platte River	Kingsley	2180.0	871.3	1150.9	1530.0	1125.6*
" " "	Minatare	60.8	20.6	19.3	32.3	22.8
" " "	Alcova	190.0	169.9	171.6	166.6	81.9
" " "	Seminole	1025.0	286.0	322.0	245.0	351.6*
" " "	Guernsey	46.0	29.5	22.5	14.7	36.1
" " "	Pathfinder	1045.5	411.4	447.1	846.5	396.8
" " "	Sutherland	185.0	47.6	51.1	51.0	49.4
Laramie River	Wheatland	70.4		1.2	10.4	31.6
ARKANSAS RIVER						
Arkansas River	Twin Lakes	57.9	15.9	13.9	13.3	25.0
" "	Sugar Loaf	17.4	7.1	5.3	5.2	7.9
" "	Clear Creek	11.4	4.3	1.6	0.6	5.1
" "	Meredith	41.9	0.0	0.0	0.0	17.5
" "	Horse Creek	26.9	0.0	0.0	0.0	9.2
" "	Adobe Creek	61.6	0.0	0.0	0.0	26.0
" "	Cucharas	40.0	11.7	0.0	0.0	5.9
" "	Two Buttes	40.9	23.4	0.0	0.0	13.5
" "	John Martin	655.0	55.5	4.9	13.1	69.4*
" "	Great Plains	150.0	0.0	0.0	0.0	51.6
Purgatoire River	Model	15.0	2.0	1.7	1.7	3.7

*Shorter periods

STATE OF MINNESOTA - 1900

COUNTY		TOWNSHIP		SECTION		ACRES		VALUATION		TAXES		REMARKS	
COUNTY		TOWNSHIP		SECTION		ACRES		VALUATION		TAXES		REMARKS	
Anoka		Anoka		1		100.00		100.00		100.00			
Anoka		Anoka		2		100.00		100.00		100.00			
Anoka		Anoka		3		100.00		100.00		100.00			
Anoka		Anoka		4		100.00		100.00		100.00			
Anoka		Anoka		5		100.00		100.00		100.00			
Anoka		Anoka		6		100.00		100.00		100.00			
Anoka		Anoka		7		100.00		100.00		100.00			
Anoka		Anoka		8		100.00		100.00		100.00			
Anoka		Anoka		9		100.00		100.00		100.00			
Anoka		Anoka		10		100.00		100.00		100.00			
Anoka		Anoka		11		100.00		100.00		100.00			
Anoka		Anoka		12		100.00		100.00		100.00			
Anoka		Anoka		13		100.00		100.00		100.00			
Anoka		Anoka		14		100.00		100.00		100.00			
Anoka		Anoka		15		100.00		100.00		100.00			
Anoka		Anoka		16		100.00		100.00		100.00			
Anoka		Anoka		17		100.00		100.00		100.00			
Anoka		Anoka		18		100.00		100.00		100.00			
Anoka		Anoka		19		100.00		100.00		100.00			
Anoka		Anoka		20		100.00		100.00		100.00			
Anoka		Anoka		21		100.00		100.00		100.00			
Anoka		Anoka		22		100.00		100.00		100.00			
Anoka		Anoka		23		100.00		100.00		100.00			
Anoka		Anoka		24		100.00		100.00		100.00			
Anoka		Anoka		25		100.00		100.00		100.00			
Anoka		Anoka		26		100.00		100.00		100.00			
Anoka		Anoka		27		100.00		100.00		100.00			
Anoka		Anoka		28		100.00		100.00		100.00			
Anoka		Anoka		29		100.00		100.00		100.00			
Anoka		Anoka		30		100.00		100.00		100.00			
Anoka		Anoka		31		100.00		100.00		100.00			
Anoka		Anoka		32		100.00		100.00		100.00			
Anoka		Anoka		33		100.00		100.00		100.00			
Anoka		Anoka		34		100.00		100.00		100.00			
Anoka		Anoka		35		100.00		100.00		100.00			
Anoka		Anoka		36		100.00		100.00		100.00			
Anoka		Anoka		37		100.00		100.00		100.00			
Anoka		Anoka		38		100.00		100.00		100.00			
Anoka		Anoka		39		100.00		100.00		100.00			
Anoka		Anoka		40		100.00		100.00		100.00			
Anoka		Anoka		41		100.00		100.00		100.00			
Anoka		Anoka		42		100.00		100.00		100.00			
Anoka		Anoka		43		100.00		100.00		100.00			
Anoka		Anoka		44		100.00		100.00		100.00			
Anoka		Anoka		45		100.00		100.00		100.00			
Anoka		Anoka		46		100.00		100.00		100.00			
Anoka		Anoka		47		100.00		100.00		100.00			
Anoka		Anoka		48		100.00		100.00		100.00			
Anoka		Anoka		49		100.00		100.00		100.00			
Anoka		Anoka		50		100.00		100.00		100.00			
Anoka		Anoka		51		100.00		100.00		100.00			
Anoka		Anoka		52		100.00		100.00		100.00			
Anoka		Anoka		53		100.00		100.00		100.00			
Anoka		Anoka		54		100.00		100.00		100.00			
Anoka		Anoka		55		100.00		100.00		100.00			
Anoka		Anoka		56		100.00		100.00		100.00			
Anoka		Anoka		57		100.00		100.00		100.00			
Anoka		Anoka		58		100.00		100.00		100.00			
Anoka		Anoka		59		100.00		100.00		100.00			
Anoka		Anoka		60		100.00		100.00		100.00			
Anoka		Anoka		61		100.00		100.00		100.00			
Anoka		Anoka		62		100.00		100.00		100.00			
Anoka		Anoka		63		100.00		100.00		100.00			

RESERVOIR STATUS
(Continued)

STREAM	RESERVOIR	USABLE CAPACITY 1000 A.F.	USABLE STORAGE - 1000 ACRE FEET			
			1956	1955	1954	15-yr.Avg. 1938-1952
COLORADO DRAINAGE						
Taylor River	Taylor Park	106.2	37.7	51.4	49.9	61.7
Los Pinos River	Vallecito	126.3	43.2	57.1	34.2	40.1*
Groundhog Creek	Groundhog	21.7	3.5	4.0	4.0	9.0
Blue River	Green Mountain	146.9	56.3	45.2	75.6	68.1*
Colorado River	Granby	467.5	56.6	179.7	396.8	-- *
Colorado River	Lake Mead	27935.0	11038.0	11869.0	16,242.0	18536.0
Colorado River	Lake Havasu	688.0	592.1	1709.7	620.0	568.2*
Colorado River	Lake Mohave	1818.3	1710.3	616.3	1691.0	-- *
SALT AND GILA DRAINAGE						
Salt River	Roosevelt	1420.0	236.2	571.8	1014.5	434.9
" "	Apache	245.0	242.5	242.8	221.2	188.1
" "	Canyon	58.0	54.6	57.8	57.2	37.6
" "	Saguaro	70.0	65.4	55.2	51.0	28.6
Verde River	Bartlett	200.0	85.2	65.0	40.4	59.1*
Aqua Fria River	Carl Pleasant	173.0	27.8	23.1	32.6	23.0
Gila River	San Carlos	1200.0	76.3	34.9	0.4	184.0
	Horseshoe	143.0	2.2	1.8	11.0	18.6*
RIO GRANDE						
	Rio Grande	45.0	5.2	6.2	5.9	15.0
	Santa Maria	45.0	3.1	7.8	2.4	10.1
	Sanchez	103.0	13.5	3.8	3.6	12.5
	Terrace	17.7	1.4	1.0	1.5	3.3
	Continental	26.7	1.8	3.5	4.9	7.2
	Platoro	60.0	0.0	0.0	0.0	-- *
	Elephant Butte	2273.7	229.8	150.3	167.6	889.3
	Caballo	365.0	11.6	19.6	17.6	194.7
CHAMA RIVER	El Vado	226.0	0.3	0.0	3.7	50.6
CANADIAN RIVER	Conchas	600.0	264.3	144.5	167.6	275.7*
PECOS RIVER	Alamogordo	148.0		80.4	39.2	67.2
	McMillan-Avalon	45.0		34.8	5.1	13.5

*Shorter periods

COOPERATIVE SNOW SURVEYS
SUMMARY OF SNOW MEASUREMENTS

March 1, 1956

WATERSHEDS	No. of Courses Averaged	Years of Record	March 1, 1956 Water Contents as percent of		
			1955	1954	Average
PLATTE RIVER					
Sweetwater	2	16-19	145	124	152
North Platte River	10	18-20	157	206	134
Laramie River	7	15-19	196	213	146
South Platte River*	3	16-19	144	169	154
Poudre River	6	16-19	201	224	154
Big Thompson River	2	15-18	222	208	149
St. Vrain River	1	19	311	205	151
Boulder Creek	2	18-19	221	261	181
Clear Creek	2	14-19	238	249	157
ARKANSAS RIVER	6	14-20	164	174	127
COLORADO RIVER					
Colorado River*	20	8-20	199	218	143
Roaring Fork	4	9-20	170	215	141
Plateau Creek	2	16-19	104	131	107
Yampa River	5	17-20	141	241	143
White River	2	17-20	157	215	136
Gunnison River	7	15-20	125	161	113
Dolores River	3	14-17	155	243	119
San Juan River	5	15-19	159	191	119
Animas River	3	17-19	163	334	140
Gila River	9	8-18	110	-	110
Salt River	6	15-18	126	343	100
Verde River	6	9-10	25	233	22
Little Colo. River	5	9-18	66	263	64
Williams River	3	10	-	-	-
Lower Colo. River	4	9	45	156	49
RIO GRANDE					
Rio Grande (Colo.)	10	14-19	161	192	106
Upper Rio Grande	3	17-19	162	178	123
Alamosa River	2	15-19	237	249	128
Conejos River	2	19	166	252	94
Culebra River	1	16	94	98	65
Rio Grande (N.M.)	10	14-19	120	190	82
Chama River	4	15-19	181	248	101
Pecos River	3	14-19	97	311	61
Canadian River	3	14-18	85	113	64

* - Above Glenwood Springs

VALLEY PRECIPITATION^{1/}

Division Averages and Departures^{3/}

DRAINAGE DIVISIONS	Fall Sept.-Oct.-Nov. 1955		Winter December & January	
	Average	Departure ^{2/}	Average	Departure ^{2/}
NORTH PLATTE RIVER, Wyo.	2.07	-1.14	2.27	+ .39
SOUTH PLATTE RIVER	1.80	-1.35	.83	- .16
ARKANSAS River	1.45	-1.53	1.22	- .28
COLORADO River	3.16	-1.52	5.42	+2.10
GREEN River, Wyo.	2.26	- .49	2.00	+ .67
SAN JUAN River, New Mexico	.65	-2.49	2.47	+ .68
COLORADO RIVER, Arizona	.44	- .76	1.02	- .31
GILA River, Arizona	.96	-3.36	1.15	-1.19
CANADIAN RIVER, New Mexico	2.55	-1.09	.52	- .73
RIO GRANDE, Colo.	.83	-1.63	1.06	+ .19
RIO GRANDE (N) New Mexico	1.16	-2.65	2.01	- .29
RIO GRANDE (S) New Mexico	1.66	- .86	.34	- .65
PECOS River, New Mexico	3.26	- .47	.51	- .39

^{1/} Preliminary analysis by U. S. Weather Bureau from data furnished by Meteorological Service of Canada and U. S. Weather Bureau.

^{2/} Departure from 15-year (1938-1952) drainage division average.

^{3/} Selected Stations.

Table 1 Distribution of ...

Year	Total	Percentage		Total
		1950	1951	
1950	100	100	100	100
1951	100	100	100	100
1952	100	100	100	100
1953	100	100	100	100
1954	100	100	100	100
1955	100	100	100	100
1956	100	100	100	100
1957	100	100	100	100
1958	100	100	100	100
1959	100	100	100	100
1960	100	100	100	100
1961	100	100	100	100
1962	100	100	100	100
1963	100	100	100	100
1964	100	100	100	100
1965	100	100	100	100
1966	100	100	100	100
1967	100	100	100	100
1968	100	100	100	100
1969	100	100	100	100
1970	100	100	100	100

1. The data in this table are based on the results of the 1950 and 1951 censuses of Canada and the United States.

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COOPERATIVE SNOW SURVEYS

March 1, 1956

Drainage Basin and Snow Course	Snow Cover Measurements								
	Number	Elev.	1956			Past Record			
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (In.)			Years of Record
						1955	1954	Average 1938-52	
COLORADO RIVER DRAINAGE									
**									
COLORADO RIVER (Above Glenwood Springs)									
Cameron Pass*(a)	5J1	10300	3/3	72	24.2	13.0	11.7	16.7	19
Park View*	6J2	9200	2/28	44	9.7	5.1	4.9	7.7	20
Phantom Valley	5J4	9300	2/28	47	12.9	7.2	4.3	8.9	20
Hoosier Pass	6K1	11400	2/28	50	14.4	9.0	8.5	9.3	19
Berthoud Pass	5K3	9700	2/29	58	16.3	8.9	8.0	12.3	20
Tennessee Pass	6K2	10200	2/29	50	12.4	7.1	5.2	7.5	20
M.Fork Camp Gr.	5K4	9000	Est.	40	10.1	6.2	4.6	8.2	20
Fiddler Gulch	6K5	11000	Est.	63	19.4	9.0	9.3	12.9	19
Lulu	5J7	10200	2/26	71	21.8	9.8	7.8	14.2	18
Willow Creek P.	6J5	9500	2/28	57	13.6	7.8	7.0	10.4	18
N.Inlet Grand L.	5J9	9000	3/1	42	11.4	6.0	4.4	7.8	17
Lake Irene	5J10	10600	3/1	81	27.1	12.7	13.2	17.8	18
Arrow	5K6	9900	2/29	47	12.9	6.5	4.7	8.1	18
Lapland	5K7	9500	3/1	49	12.5	7.9	5.9	9.9	16
Fremont Pass #2	6K8	11400	2/29	64	18.2	8.6	9.8	12.9	20
Lynx Pass	6J6	9100	2/29	58	15.8	10.4	7.3	10.5	20
Shrine Pass	6K9	10500	3/1	67	21.5	8.7	10.5	13.9	14
Grizzly Peak	5K9	11250	2/28	74	23.0	8.1	9.7	15.2	14
Glen-Mar Ranch	5K10	8850	3/1	37	9.1	5.2	3.8	8.2	9
Monarch Lake	5J14	8500	3/1	53	15.5	9.1	7.3	13.0	8
Granby	5J16	8700	2/29	41	10.1	4.3	3.0	--	7
Grand Lake	5J19	8600	2/28	49	11.8	5.6	3.5	--	7
Berthoud Summit	5K14	11300	3/1	66	19.1	12.5	9.6	--	5
Frazer View	5K15	10600	3/1	52	13.8	7.3	4.5	--	5
Gore Pass	6J11	8900	2/29	48	13.2	9.5	4.0	--	5
Frisco	6K13	9300	2/28	42	10.8	4.5	4.1	--	5
Snake River	5K16	9700	2/28	46	12.1	4.4	3.8	--	5
Pando	6K19	9500	2/29	44	12.1	6.3	7.5	--	3
Vail Pass	6K15	10000	2/29	73	25.0	9.9	8.6	--	3
ROARING FORK									
Ind.Pass Tunnel	6K4	10700	2/28	58	17.5	9.5	11.0	13.8	20
No.Lost Trail (a)	7K1	9200	2/29	59	17.4	12.4	7.7	11.1	20
Nast	6K6	8700	2/29	35	8.3	3.7	2.6	6.0	19
Ivanhoe	6K10	10400	2/28	74	24.0	14.1	9.9	16.5	9
GREEN RIVER									
Dutch Joe	9G5	8700	2/27	46	12.8	4.2	5.6	--	5
Mulligan Park	9G1	8900	2/28	45	11.6	4.4	7.1	9.9	14
Kendall R.S.	10F15	7900	2/25	43	11.9	6.6	6.6	10.6	15
Loomis Park	10F16	8500	2/24	65	20.8	10.4	16.8	15.2	15
East Rim Divide	10F17	7950	2/29	46	12.8	6.1	8.9	10.3	16

NS - No survey

*On adjacent drainage

** Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged

(a) Air observed

COOPERATIVE SNOW SURVEYS

March 1, 1956

Drainage Basin and Snow Course	Number	Elev.	Snow Course Measurements						
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Past Record			Years of Record
						Water Content (In.)			
						1955	1954	Average 1938-52	
COLORADO RIVER DRAINAGE									
**									
YAMPA RIVER									
Dry Lake (a)	6J1	8300	3/3	79	26.0	17.5	8.5	16.3	17
Columbine Lodge*	6J3	9300	2/28	84	27.4	20.7	11.1	18.4	20
Elk River (a)	6J4	8700	3/3	62	19.5	17.8	7.7	14.1	17
Lynx Pass*	6J6	9100	2/29	58	15.8	10.4	7.3	10.5	20
Routt Line	6J8	9700	2/28	105	34.6	24.3	19.5	-	5
Rabbit Ears	6J9	9550	2/28	99	32.2	20.6	14.2	-	5
Yampa View	6J10	8500	2/28	55	16.3	12.1	7.3	-	5
Old Battle*	6H10	9800	2/27	95	32.6	19.6	16.0	25.5	19
WHITE RIVER									
Burro Mountain	7K2	9000	2/28	62	18.2	12.1	11.5	14.4	20
Rio Blanco	7J1	8500	3/1	61	18.7	11.5	6.2	12.8	17
PLATEAU CREEK									
Mesa Lakes	7K4	10000	2/26	49	15.2	14.1	11.7	12.9	19
Trickle Divide (a)	7K5	10000	3/3	75	22.5	22.3	17.1	22.4	16
GUNNISON RIVER									
Crested Butte	6L1	9000	3/1	54	15.6	11.0	5.8	12.0	20
Park Cone	6L2	9700	3/1	47	11.9	6.7	6.7	8.4	19
Alexander Lake (a)	7K3	10000	3/3	62	18.6	19.5	13.1	17.9	19
Iron-ton Park	7M6	9800	2/28	49	15.2	7.2	4.9	11.1	19
Trickle Divide (a)	7K5	10000	3/3	75	22.5	22.3	17.1	22.4	16
Park Reservoir (a)	7K6	9500	3/3	71	21.3	21.0	18.1	21.1	16
Porphyry Creek	6L3	10800	2/29	55	15.4	8.9	9.2	13.5	15
Lake City	7M8	10300	3/1	26	7.5	5.7	NS	-	7
Spring Cr. Pass*	6M13	10900	2/28	30	6.2	6.0	6.0	-	5
Cochetopa Pass*	6L6	10000	2/29	22	5.2	4.4	3.8	-	7
McClure Pass (a)	7K8	9500	2/29	58	18.4	13.7	6.9	-	6
Red Mt. Pass	7M15	11000	3/1	81	27.3	19.1	20.0	-	5
SAN JUAN RIVER									
Wolf Creek Pass*	6M1	10000	3/1	88	32.3	18.6	17.2	24.3	19
Upper San Juan	6M3	10000	3/1	91	30.9	21.6	19.3	27.0	18
Granite Peaks	7M7	7950	2/29	30	8.5	6.5	2.0	7.4	15
Wolf Creek Summit	6M17	11000	3/1	84	30.2	16.1	15.9	-	5
Chama Divide*	6N2	7750	2/29	19	5.3	3.4	2.4	5.2	16
Chamita*	6N3	8500	2/29	37	10.8	5.5	5.0	10.0	15

* - On adjacent drainage

** - Courses with less than 15 years records in period 1938-52 have all years
(a) - Air observed prior to 1952 averaged.

NS - No survey

COOPERATIVE SNOW SURVEYS

March 1, 1956

Drainage Basin and Snow Course	Snow Course Measurements								
	Number	Elev.	1956			Past Record			
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (In.)			
						1955	1954	Average 1938-52	Years of Record

**

COLORADO RIVER DRAINAGE

ANIMAS RIVER									
Silverton Sub.S.	7M4	9400	3/1	27	6.7	7.5	0.0	5.3	17
Ironton Park	7M6	9800	2/28	49	15.2	7.2	4.9	11.1	19
Cascade	7M5	8850	3/1	48	16.2	8.6	6.5	10.9	17
Spud Mt.	7M1	10700	3/1	72	25.0	22.5	12.2	--	5
Molas Lake	7M12	10500	3/1	52	16.9	8.4	3.2	--	5
Howardville	7M13	9800	Est	38	10.4	8.0	7.6	--	5
Mineral Creek	7M14	10300	3/1	54	15.1	7.5	8.3	--	5
Red Mt. Pass	7M15	11000	3/1	81	27.3	19.1	20.0	--	5

DOLORES RIVER

Rico	7M1	8700	2/29	36	9.1	6.6	1.8	7.0	16
Telluride	7M2	8600	2/29	35	8.0	4.1	4.4	7.3	17
Lizard Head	7M3	10300	2/29	58	15.0	10.0	7.0	12.8	14
Trout Lake	7M9	9700	2/29	53	13.5	8.5	6.3	--	7

GILA RIVER

Frisco Divide	8S1	8000	2/29	8	3.0	1.7	0.2	2.0	18
State Line	9S8	8000	2/29	10	3.7	2.4	0.3	2.8	18
Taylor Creek	7S1	7850	2/29	0	0.0	0.0	NS	0.5	14
Inman	7S2	7800	2/29	0	0.0	0.0	0.0	0.7	10
Nutrios	9S4	8500	2/29	8	2.4	1.6	0.1	2.2	18
Coronado Trail	9S7	8000	2/28	10	2.9	3.1	0.0	3.5	18
Beaver Head	9S6	8000	2/29	13	3.1	2.7	0.0	3.4	18
Rose Canyon	10T2	7300	2/29	3	1.2	0.9	0.0	0.5	8
Bear Wallow	10T1	8100	2/29	11	3.6	5.4	1.5	2.3	8

VERDE RIVER

Iron Springs*	12R2	6200	2/29	0	0.0	0.0	0.0	2.0	10
Camp Wood	12R1	5700	2/29	0	0.0	0.0	0.0	1.2	10
Mingus Mountain	12R3	7100	2/29	0	0.0	0.0	0.0	1.9	9
Morman Lake*	11R4	7350	2/29	9	2.7	7.0	T	7.0	9
Fort Valley*	11P2	7350	2/29	3	1.0	4.0	T	3.2	9
Chalender*	12P1	7100	2/29	2	0.6	4.9	1.6	3.7	9
Munds Park	11R1	6500	2/29	0	0.0	4.2	0.0	--	6
Casner Park	11R2	6930	2/29	6	1.2	5.9	0.0	--	5
Mormon Mt.	11R3	7500	2/29	14	4.6	7.8	T	--	6

*On adjacent drainage

**Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

NS - No Survey

COOPERATIVE SNOW SURVEYS

March 1, 1956

Drainage Basin and Snow Course	Snow Course Measurements								
	Number	Elev.	1956			Past Record			Years of Record
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content(In.)		Average 1938-52	
						1955	1954		

COLORADO RIVER DRAINAGE									
WILLIAMS RIVER									
Iron Springs	12R2	6200	2/29	0	0.0	0.0	0.0	2.0	10
Camp Wood*	12R1	5700	2/29	0	0.0	0.0	0.0	1.2	10
Willow Ranch	13P1	5000	3/1	0	0.0	0.0	0.0	0.3	10
LOWER COLORADO RIVER									
Bright Angel	12N1	8400	2/29	23	7.1	8.8	4.8	10.6	9
Grand Canyon	11P1	7500	2/29	4	1.2	4.4	T	2.7	9
Fort Valley	11P2	7350	2/29	3	1.0	4.0	T	3.2	9
Chalender	12P1	7100	2/29	2	0.6	4.9	1.6	3.7	9
SALT RIVER									
Forest Dale	10R6	6430	2/29	2	0.8	0.8	0.0	1.3	17
McNary	9R2	7200	2/29	9	3.6	2.5	3.8	2.9	17
Nutriosio	9S4	8500	2/29	8	2.4	1.6	0.1	2.2	18
Coronado Trail	9S7	8000	2/29	10	2.9	3.1	0.0	3.5	18
Beaver Head	9S6	8000	2/29	13	3.1	2.7	0.0	3.4	18
Milk Ranch	9R1	7000	2/29	6	1.9	0.9	0.0	0.9	15
Maverick Fork	9S2	9020	3/1	30	9.7	7.0	4.1	--	5
Baldy	9S1	9125	3/1	20	6.1	4.8	5.2	--	6
Fort Apache	9R5	9160	3/1	27	8.7	4.8	5.4	--	6
Pacheta	9S5	7800	2/29	20	4.9	3.6	T	--	6
Workman Creek	10S1	6900	2/29	12	3.4	3.1	0.0	--	4
LITTLE COLORADO									
Forest Dale*	10R6	6430	2/29	2	0.8	0.8	0.0	1.3	17
McNary	9R2	7200	2/29	9	3.6	2.5	3.8	2.9	17
Nutriosio*	9S4	8500	2/29	8	2.4	1.6	0.1	2.2	18
Mormon Lake	11R4	7350	2/29	9	2.7	7.0	T	7.0	9
Fort Valley	11P2	7350	2/29	3	1.0	4.0	T	3.2	9
Mormon Mt.	11R3	7500	2/29	14	4.6	7.8	T	--	6

*On adjacent drainage

**Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

NS - No Survey

CONSTRUCTION AND REPAIRS

March 1, 1900

Date	Particulars	Debit	Credit	Balance	Debit	Credit	Balance	Debit	Credit	Balance
10	By Balance									
11	To Cash									
12	By Cash									
13	To Cash									
14	By Cash									
15	To Cash									
16	By Cash									
17	To Cash									
18	By Cash									
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96	By Cash									
97	To Cash									
98	By Cash									
99	To Cash									
100	By Cash									

NO BALANCE
 RECORDED WITH DEBIT 12 CENTS IN CREDIT 12-12-12
 12-12-12
 12-12-12

COOPERATIVE SNOW SURVEYS

March 1, 1966

Drainage Basin and Snow Course	Snow Cover Measurements								
	Number	Elev.	Date of Survey	1956		Past Record			
				Snow Depth (In.)	Water Content (In.)	Water Content (In.)		Years or Record	
						1955	1954	Average 1938-52	
COLORADO RIVER DRAINAGE (UTAH)									
**									
UPPER GREEN RIVER									
King's Cabin (upper)	9J1	8800	2/28	44	11.7	8.3	10.6	8.8	7
King's Cabin (lower)	9J2	8600	2/28	39	9.6	6.7	8.6	8.2	7
DUCHESNE RIVER									
Trial Lake*	10J8	9800	2/28	98	35.3	11.9	18.4	21.0	10
Soapstone R.S.*	11J25	7800	2/28	51	14.8	8.0	8.3	10.3	9
Daniels-Strawberry Summit	11J23	8000	2/27	58	17.0	11.8	11.4	13.6	25
Strawberry Divide*	11J8	8000	2/25	64	21.6	15.1	11.4	18.1	20
East Portal*	11J7	7560	2/25	34	9.7	7.6	6.5	11.6	21
Indian Canyon	10K1	9100	3/1	38	12.3	9.9	8.8	9.0	18
Lakefork Mountain	10J10	10500	2/29	49	14.9	10.0	9.3	9.4	5
Lakefork Mountain #2	10J11	8900	2/29	40	12.0	7.8	7.2	--	3
Lakefork Mountain #3	10J12	8100	2/29	32	8.4	7.1	6.0	--	3
Paradise Park	9J3	10500	2/27	56	15.9	9.7	12.4	--	5
Mosby Mountain (lower)	9J5	9500	2/27	46	11.6	8.9	10.9	--	6
PRICE RIVER									
Huntington-Horseshoe	11K5	9800	NS	NS	NS	17.8	13.5	--	6
Gooseberry Reservoir	11K4	8700	2/27	59	18.7	14.2	12.2	16.0	11
Mud Creek	11K6	8250	2/28	67	22.4	10.2	8.9	--	6
Staley Ranch	11K7	7600	2/28	26	8.0	7.0	3.8	7.2	15
Dry Valley Divide	11K8	7800	2/28	40	12.3	8.7	7.3	10.0	15
Indian Canyon*	10K1	8100	3/1	38	12.3	9.9	8.8	9.0	17
SAN RAFAEL RIVER									
Huntington-Horseshoe	11K5	9800	NS	NS	NS	17.8	13.5	--	6
Gooseberry Reservoir	11K4	8700	2/27	59	18.7	14.2	12.2	16.0	11
ESCALANTE RIVER									
Widtsoe-Escalante Summit	11M1	9500	2/28	23	7.0	7.8	1.5	7.9	19
Widtsoe-Escalante #2	11M2	9500	2/28	29	7.1	8.2	5.2	--	6
VIRGIN RIVER									
Long Valley Junction	12M6	7500	2/27	0	0	5.0	4.4	--	7
Harris Flat R.S.*	12M5	7700	2/27	15	4.5	9.8	5.9	10.2	13
Duck Creek R.S.*	12M4	8560	2/27	43	13.3	12.5	9.5	14.5	12
Midway Valley*	12M2	9400	2/29	63	20.6	19.4	18.9	--	2
Cedar Breaks*	12M1	10390	2/29	63	20.6	NS	17.4	19.6	10
Webster Flat	12M3	9200	2/29	46	13.7	14.4	13.2	--	6
LOWER COLORADO RIVER (Southeastern Utah)									
LaSal Mountain	9L1	8800				9.0	5.5	--	4

*Adjacent Drainage

**Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

NS - No Survey

COOPERATIVE SNOW SURVEYS

March 1, 1956

Drainage Basin and Snow Course	Snow Cover Measurements								
	Number	Elev.	Date of Survey	1956		Past Record			Years of Record
				Snow Depth (In.)	Water Content (In.)	Water Content(In.)			
						1955	1954	Average 1938-52	
RIO GRANDE DRAINAGE									**
RIO GRANDE IN COLORADO									
Wolf Creek Pass	6M1	10000	3/1	88	32.3	18.6	17.2	24.3	19
Upper Rio Grande	6M2	9350	2/29	31	5.8	4.3	4.5	6.9	18
Silver Lakes	6M4	9600	2/26	34	8.9	3.7	2.2	5.9	19
River Springs	6M5	9300	2/27	32	8.1	3.7	3.3	7.2	19
LaVeta Pass #2	5M1	9300	3/2	25	8.4	7.1	6.1	8.3	18
Summitville	6M6	11500	3/1	63	19.4	8.3	9.1	16.2	15
Cumbres Pass #2(a)	6M7	10000	3/3	55	18.1	12.0	7.1	20.8	19
Santa Maria	6M8	9700	2/28	26	5.8	4.0	2.8	4.5	17
Culebra	5M3	10000	3/1	25	6.4	6.8	6.5	9.8	16
Ft. Garland	5M4	8200	3/2	0	0.0	1.8	0.0	2.9	14
Platoro	6M9	9950	3/2	52	14.2	6.9	8.2	--	6
West Conejos	6M10	9450	3/3	38	10.3	4.7	5.2	--	7
La Manga	6M11	10100	3/3	64	20.6	15.4	12.6	--	7
Pyramid	6M12	10300	2/29	35	7.7	6.4	6.1	--	5
Spr. Creek Pass	6M13	10900	2/28	30	6.2	5.4	6.0	--	5
Pool Table Mt.	6M14	10000	2/27	19	3.0	4.3	3.5	--	7
Lake Humphreys	6M15	9300	2/27	27	4.3	5.1	4.8	--	7
Cochetopa Pass	6L6	10000	2/29	22	5.2	4.4	3.8	--	7
Howardville	7M13	9800	3/1	52	16.9	7.0	7.6	--	5
Red Mt. Pass	7M15	11000	3/1	81	27.3	19.1	20.0	--	5
Porcupine	6M16	10400	2/28	37	6.9	6.7	8.8	--	5
Wolf Creek Summit	6M17	11000	3/1	84	30.2	16.1	15.9	--	5
UPPER RIO GRANDE									
Wolf Creek Pass	6M1	10000	3/1	88	32.3	18.6	17.2	24.3	19
Upper Rio Grande	6M2	9350	2/29	31	5.8	4.3	4.5	6.9	18
Santa Maria	6M8	9700	2/28	26	5.8	4.0	2.8	4.5	17
ALAMOSA RIVER									
Silver Lakes	6M4	9600	2/26	34	8.9	3.7	2.2	5.9	19
Summitville	6M6	11500	3/1	63	19.4	8.3	9.1	16.2	15
CONEJOS RIVER									
River Springs	6M5	9300	2/27	32	8.1	3.7	3.3	7.2	19
Cumbres Pass #2(a)	6M7	10000	3/3	55	18.1	12.0	7.1	20.8	19
Platoro	6M9	9950	3/2	52	14.2	6.9	8.2	--	6
West Conejos	6M10	9450	3/3	38	10.3	4.7	5.2	--	7
La Manga	6M11	10100	3/3	64	20.6	15.4	12.6	--	7
CULEBRA RIVER									
Culebra	5M3	10000	3/1	25	6.4	6.8	6.5	9.8	16

(a) Air Observed

NS - No Survey

** Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

COOPERATIVE SNOW SURVEYS

March 1, 1956

March 1, 1950

Drainage Basin and Snow Course	Snow Cover Measurements								
	Number	Elev.	1956			Past Record			Years of Record
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content(In.)			
						1955	1954	Average 1938-52	

**

RIO GRANDE DRAINAGE (New Mexico)

CHAMA RIVER									
Cumbres Pass#2(a)	6M7	10000	3/3	55	18.1	12.0	7.1	20.8	19
Pay Role	6N1	9700	3/3	40	11.2	4.2	3.9	9.2	15
Chama Divide	6N2	7750	2/29	19	5.3	3.4	2.4	5.2	16
Chamita	6N3	8500	2/29	37	10.8	5.5	5.0	10.0	15
Bateman	6N4	9300	2/28	41	10.7	8.6	6.5	--	6
PECOS RIVER									
Aspen Grove*	5P1	9500	3/1	13	3.7	3.1	2.0	4.6	19
Panchuela	5P2	9200	3/1	5	1.8	2.5	0.6	3.5	19
Big Tesuque*	5P3	9000	3/1	10	3.0	3.2	0.0	5.6	14
RIO GRANDE									
Red River	5N1	9500	3/1	14	4.0	5.3	3.4	7.8	18
Taos Canyon	5N2	9000	2/29	14	4.5	5.9	3.7	5.6	18
Aspen Grove	5P1	9100	3/1	13	3.7	3.1	2.0	4.6	19
Tres Ritos	5N4	9000	3/1	17	4.2	3.9	3.3	6.0	18
Pay Role	6N1	9700	3/3	40	11.2	4.2	3.9	9.2	15
Chama Divide	6N2	7750	2/29	19	5.3	3.4	2.4	5.2	16
Chamita	6N3	8500	2/29	37	10.8	5.5	5.0	10.0	15
Cordova (a)	5N5	10100	3/3	21	6.9	8.5	5.1	9.9	14
Panchuela #2	5P2	8500	2/29	5	1.8	2.5	0.6	3.5	19
Big Tesuque	5P3	10000	3/1	10	3.0	3.2	0.0	5.6	14
Elk Cabin	5P4	8350	3/1	10	3.9	4.1	0.0	3.1	8
Rio En Medio	5P5	10400	3/1	23	6.6	4.4	5.3	--	6
Quemazon	6P1	9500	2/29	30	6.0	3.9	5.0	--	6
Bateman	6N4	9300	2/28	41	10.7	8.6	6.5	--	6
Fenton Hill	6P2	8900	3/1	18	5.4	NS	0.9	--	3
CANADIAN RIVER									
Hematite Park	5N3	9500	2/28	12	2.5	3.6	3.7	5.1	18
Tres Ritos*	5N4	9000	3/1	17	4.2	3.9	3.3	6.0	18
Cordova*(a)	5N5	10100	3/3	21	6.9	8.5	5.1	9.9	14

*On adjacent drainage

**Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

(a) Air Observed

NS - No Survey

COOPERATIVE SNOW SURVEYS

March 1, 1956

Drainage Basin and Snow Course	Snow Cover Measurements								Years of Record	
	Number	Elev.	1956			Past Record				
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (In.)				
						1955	1954	Average 1938-52		
PLATTE RIVER DRAINAGE										**
SWEETWATER RIVER										
Grannier Meadows	8G4	9000	3/1	53	16.6	12.5	13.5	11.5	19	
South Pass*	8G3	9000	3/1	56	18.3	11.7	14.6	11.5	16	
Larsen Creek	9G6	9000	NS	NS	NS	3.6	4.2	--	7	
NO PLATTE RIVER										
Cameron Pass (a)	5J1	10300	3/3	72	24.2	13.0	11.7	16.7	19	
Park View	6J2	9200	2/29	44	9.7	5.1	4.9	7.7	20	
Columbine Lodge	6J3	9300	2/28	84	27.4	20.7	11.1	18.4	20	
Willow Cr. Pass*	6J5	9500	2/28	57	13.6	7.8	7.0	10.4	18	
Northgate	6J7	8500	2/28	32	7.5	4.0	3.5	--	6	
Bottle Creek	6H8	8200	2/27	51	15.6	10.0	9.2	11.4	18	
Webber Spring	6H9	9000	2/27	61	19.2	12.2	8.8	14.9	18	
Old Battle	6H10	9800	2/27	95	32.6	19.6	16.0	25.5	19	
N. French Creek	6H4	10200	2/26	90	29.2	19.0	16.4	23.3	18	
N. Barrett Creek	6H5	9400	2/26	68	19.6	13.2	9.9	15.0	19	
Ryan Park	6H6	8400	2/26	44	13.6	9.0	4.4	8.8	19	
Spring Creek	6H7	9000	2/28	49	15.6	9.3	7.9	--	6	
Albany	6H11	9400	3/2	52	16.6	8.3	6.6	--	7	
La Bonte	5G2	8450	2/28	17	4.5	5.8	3.8	--	7	
Boxelder	5G1	9000	2/29	17	3.6	5.3	3.9	--	6	
LARAMIE RIVER										
Roach	6J8	9800	3/3	69	22.7	13.5	12.6	15.1	15	
Deadman Hill(a)	5J6	10200	3/3	56	17.8	8.5	10.5	11.4	19	
Brooklyn Lake	6H1	10200	3/1	76	26.2	13.0	12.7	17.9	19	
Fox Park	6H12	9200	2/27	33	8.5	4.1	1.4	7.2	19	
Pole Mtn. #2*	5H1	8700	2/29	23	6.3	4.5	1.1	4.3	19	
Libby Lodge	6H3	8700	3/2	44	12.1	5.3	5.9	8.3	18	
Hairpin Turn	6H2	9500	3/1	46	13.8	5.5	6.0	9.2	18	
Albany	6H11	9900	3/2	52	16.6	8.3	6.6	--	7	
POUDRE RIVER										
Cameron Pass (a)	5J1	9400	3/3	72	24.2	13.0	11.7	16.7	19	
Chambers Lake	5J2	10300	3/1	38	11.3	6.2	2.5	7.2	19	
Big South	5J3	8600	2/1	15	4.1	1.3	0.6	2.1	18	
Deadman Hill (a)	5J6	10200	3/3	56	17.8	8.5	10.5	11.4	19	
Lake Irene*	5J10	10600	3/1	81	27.1	12.7	13.2	17.8	18	
Hour Glass Lake	5J11	9500	3/1	37	9.6	4.9	3.4	6.0	16	
Red Feather	5J20	9000	2/28	34	8.6	6.5	3.6	--	6	
Lost Lake	5J23	9300	3/1	49	15.2	6.8	6.3	--	4	

*On adjacent drainage

**Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

(a) air observed

NS - No survey

392. 1. 10. 1941

COOPERATIVE SNOW SURVEYS

March 1, 1956

Drainage Basin and Snow Course	Snow Cover Measurement								
	Number	Elev.	1956			Past Record			Years of Record
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (In.)			
						1955	1954	Average 1938-52	
PLATTE RIVER DRAINAGE									
BIG THOMPSON RIVER									
Lake Irene*	5J10	10600	3/1	81	27.1	12.7	13.2	17.8	18
Hidden Valley	5J13	9550	2/27	47	13.2	5.5	6.2	9.4	15
Deer Ridge	5J17	9050	3/1	39	6.9	2.4	1.0	---	7
Longs Peak	5J22	10500	2/26	51	14.1	3.9	5.0	---	5
Two-Mile	5J26	10400	2/27	61	19.0	7.3	8.2	---	4
ST. VRAIN RIVER									
Wild Basin	5J5	10000	3/1	51	16.8	5.4	8.2	11.1	19
Copeland Lake	5J18	8600	3/1	23	6.8	2.1	2.2	---	7
Ward	5J21	9500	3/1	26	7.2	2.1	4.7	---	6
BOULDER CREEK									
E. Port. Moffat T.	5K1	9400	2/29	27	7.7	2.6	1.7	4.0	19
University Camp	5J8	10300	2/28	64	19.8	14.4	12.6	16.7	18
Moffat	5J12	9400	2/29	41	13.8	4.5	3.5	---	6
CLEAR CREEK									
Loveland Pass	5K5	10600	2/28	62	19.3	9.7	7.3	11.8	19
Grizzly Peak*	5K9	11250	2/28	74	23.0	8.1	9.7	15.2	14
Empire	5K10	9650	3/1	34	9.9	4.7	3.7	---	7
Berthoud Falls	5K13	10500	3/1	53	17.2	9.0	7.4	---	5
Clear Creek	5K17	11200	2/28	66	21.0	9.8	8.5	---	4
SOUTH PLATTE RIVER									
Hoosier Pass	6K1	11400	2/28	50	14.4	9.0	8.5	9.3	19
Fairplay	6K2	10000	2/28	9	1.9	2.7	0.0	1.0	18
Jefferson Cr.	5K8	10100	2/28	41	10.0	6.7	7.0	6.9	16
Geneva Park	5K11	9750	2/28	16	4.0	3.1	1.2	---	6
ARKANSAS DRAINAGE									
ARKANSAS RIVER									
Tennessee Pass	6K2	10200	2/29	50	12.4	7.1	5.2	7.5	20
Twin Lakes T.	6K3	10500	3/1	35	8.7	5.5	7.0	8.9	18
La Veta Pass*	5M1	9300	2/29	25	8.4	7.1	6.1	8.3	18
4-Mile Park	6K7	9700	2/29	19	4.2	4.2	2.8	3.5	17
Fremont Pass	6K8	11400	2/29	64	18.2	8.6	9.8	12.9	20
Monarch Pass	6L4	10500	2/29	59	18.7	10.8	9.9	14.5	14
St. Elmo	6L5	10600	3/1	43	12.2	6.2	7.5	---	6
Timberline	6K11	11100				NS	11.3	---	6
Westcliffe	5L2	9000	3/1	25	6.6	6.2	2.6	---	3
Cooper Hill	6K16	10600	2/29	38	10.5	4.6	4.9	---	3
East Fork	6K17	10700	3/1	45	12.0	4.9	4.2	---	3

(a) Air observed

*On adjacent drainage

** - Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

NS - No survey

COMPARATIVE DATA SHEET

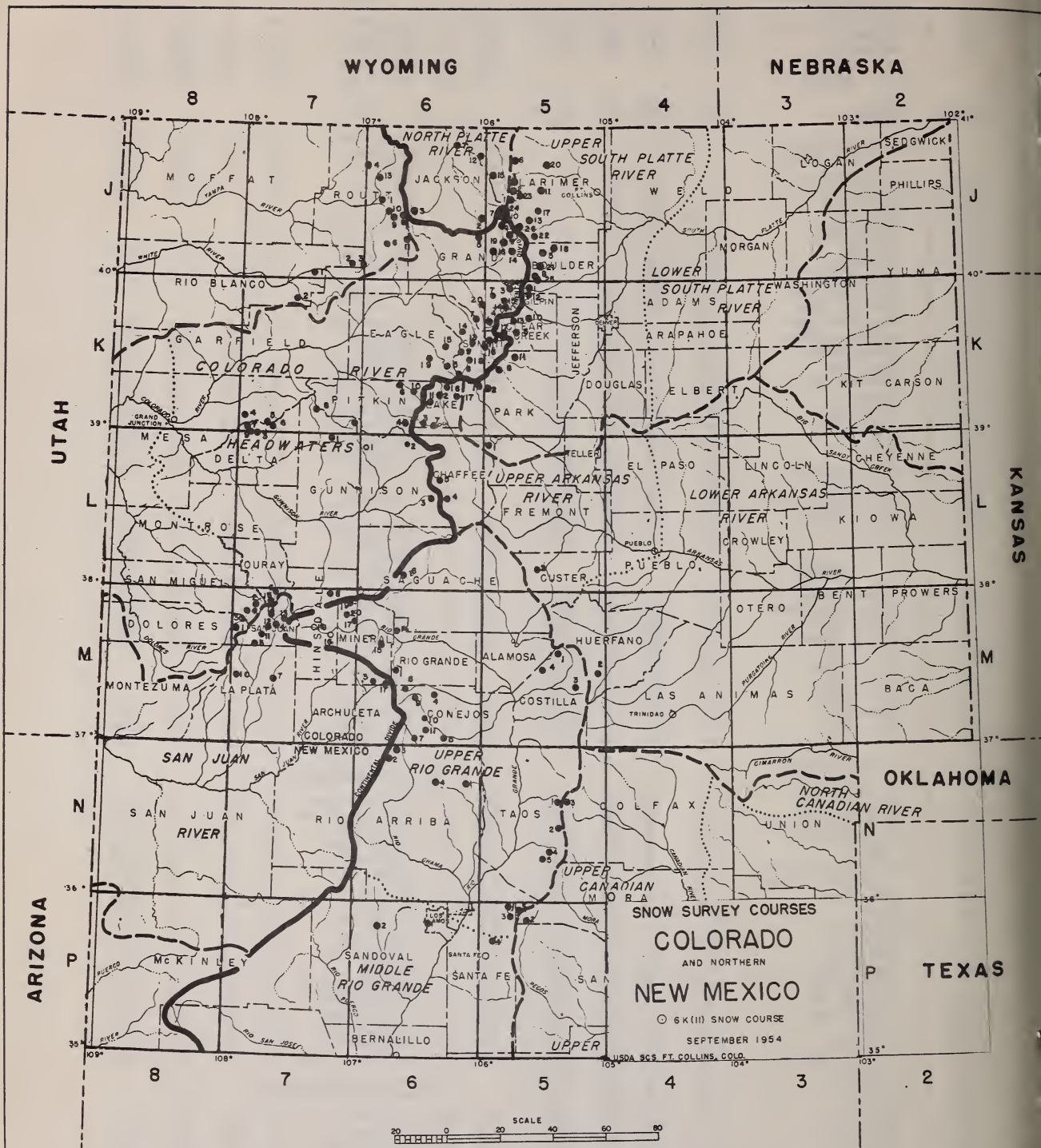
Form 1-1-12

STATION DATA										ANALYSIS DATA									
STATION NO.					STATION NAME					ANALYSIS NO.					ANALYSIS NAME				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320
341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360
381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400
421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440
461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480
501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520
541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560
581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600
621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640
661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680
701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720
741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760
781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800
821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840
861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880
901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920
951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970
991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010

(All data entered by hand)
 No further action
 as shown with line 15 (see page 10)
 before 10/12/12

LIST AND LOCATION OF SNOW COURSES

No.	State	Name	Sec.	Twp.	Rge.	Elev.	No.	State	Name	Sec.	Twp.	Rge.	Elev.
<u>North Platte</u>							<u>Yampa</u>						
6J2	C	Park View	24	5N	78W	9200	6J1	C	Dry Lake	26	7N	84W	8300
6J3	C	Columbine	21	5N	82W	9300	6J4	C	Elk River	6	10N	85W	9300
6J7	C	Northgate	8	11N	79W	8500	6J8	C	Routt Line	13	5N	83W	9700
<u>Laramie</u>							6J9	C	Rabbit Ears	30	5N	83W	9550
6J12	C	Roach	5	10N	77W	9800	6J10	C	Yampa View	21	5N	84W	8500
5J15	C	McIntyre	35	10N	76W	9100	<u>White</u>						
<u>South Platte</u>							7K2	C	Burro Mountain	15	2S	91W	9000
5J1	C	Cameron Pass	2	6N	76W	10300	7J1	C	Rio Blanco	28	1N	88W	8500
5J2	C	Chambers Lake	6	7N	75W	9000	6J13	C	Clark	24	9N	85W	7800
5J3	C	Big South	33	8N	75W	8600	7J2	C	Flat Top	24	1N	87W	9500
5K1	C	East Portal	2	2S	74W	9400	7J3	C	Bear River	14	1N	86W	9100
6K1	C	Hoosier Pass	13	8S	78W	11100	<u>Plateau Creek</u>						
5K2	C	Fairplay	33	9S	77W	10000	7K4	C	Mesa Lakes	35	11S	96W	10000
5J5	C	Wild Basin	24	3N	74W	10000	7K5	C	Trickle Divide	23	11S	94W	10000
5J6	C	Deadman Hill	25	10N	75W	10200	<u>Gunnison</u>						
5J8	C	University Camp	26	1N	73W	10300	6I1	C	Crested Butte	22	13S	86W	9000
5K5	C	Loveland Pass	27	4S	76W	10600	6I2	C	Park Cone	19	14S	82W	9700
5J11	C	Hour Glass Lake	18	7N	73W	9500	7K3	C	Alexander Lake	2	12S	95W	10000
5K8	C	Jefferson Creek	14	7S	76W	10100	7K6	C	Ironton Park	29	43N	7W	9800
5J13	C	Hidden Valley	23	5N	74W	9550	7K7	C	Park Reservoir	34	11S	94W	9500
5J17	C	Deer Ridge	19	5N	73W	9050	6I3	C	Porphyry Creek	19	49N	6E	10800
5J18	C	Copeland Lake	21	3N	73W	8600	7K7	C	Kannah Creek	5	12S	95W	10700
5K10	C	Empire	21	3S	75W	9650	7K8	C	Lake City	13	43N	4W	10300
5K11	C	Geneva Park	18	6S	74W	9750	7K8	C	McClure Pass	1	11S	89W	9500
5J20	C	Red Feather	26	10N	74W	9000	7K15	C	Red Mountain	13	42N	8W	11000
5K12	C	Moffatt	2	2S	74W	9400	7K9	C	Ward Lake	2	12S	95W	10000
5J21	C	Ward	1	1N	73W	9500	<u>San Juan</u>						
5K13	C	Berthoud Falls	15	3S	75W	10500	6M3	C	Upper San Juan	1	37N	1E	10000
5J22	C	Longs Peak	32	4N	73W	10500	7M4	C	Silverton	10	41N	7W	9400
5J23	C	Lost Lake	32	8N	75W	9300	7M5	C	Cascade	13	39N	9W	8850
5K17	C	Clear Creek	28	4S	76W	11200	7M7	C	Granite Peaks	23	37N	6W	7950
5J25	C	Boulder Falls	26	1N	73W	10000	7M10	C	La Plata	4	36N	11W	9700
5J26	C	Two Mile	22	5N	74W	10500	7M11	C	Spud Mountain	32	40N	8W	10700
<u>Arkansas</u>							7M12	C	Molas Lake	7	40N	7W	10500
6K2	C	Tennessee Pass	21	8S	80W	10200	7M13	C	Howardville	12	41N	7W	9800
6K3	C	Twin Lakes Tunnel	22	11S	82W	10500	7M14	C	Mineral Creek	35	42N	8W	10300
5M1	C	LaVeta Pass	22	28S	70W	9300	<u>Dolores</u>						
6K7	C	Four Mile Park	23	11S	81W	9700	7M1	C	Rico	11	39N	11W	8700
5M2	C	Blue Lakes	30	31S	69W	10000	7M2	C	Telluride	6	42N	8W	8600
6L4	C	Monarch Pass	16	49N	6E	10500	7M3	C	Lizzard Head	24	41N	10W	10300
6I5	C	Saint Elmo	31	15S	80W	10600	7M9	C	Trout Lake	8	41N	9W	9700
6K11	C	Timberline	8	9S	81W	11100	<u>Rio Grande (Colorado)</u>						
6K16	C	Cooper Hill	14	8S	80W	10600	6M1	C	Wolf Creek Pass	4	37N	2E	10000
6K17	C	East Fork	15	8S	79W	10700	7M16	C	Upper Rio Grande	13	40N	4W	9350
5I2	C	Westcliffe	19	22S	73W	9000	6M4	C	Silver Lakes	15	36N	5E	9600
<u>Upper Colorado</u>							6M5	C	River Springs	25	33N	6E	9300
5J4	C	Phantom Valley	7	5N	75W	9300	6M6	C	Summitville	30	37N	4E	11500
5K3	C	Berthoud Pass	35	2S	75W	9700	6M7	C	Cumbres Pass	17	32N	5E	10000
5K4	C	M. F. Camp Ground	16	3S	77W	9000	7M17	C	Santa Maria	8	41N	2W	9700
6K5	C	Fiddler Gulch	1	8S	80W	11000	5M3	C	Culebra	37,2N	105,2W		10000
5J7	C	Lulu	25	6N	76W	10200	5M4	C	Fort Garland	13	29N	72W	8200
6J5	C	Willow Creek Pass	1	4N	78W	9500	6M9	C	Platoro	22	36N	4E	9950
5J9	C	N. Inlet Grand Lake	26	4N	75W	9000	6M10	C	West Conejos	21	34N	5E	9450
5J10	C	Lake Irene	8	5N	75W	10600	6M11	C	Lalanga	23	33N	5E	10000
5K6	C	Arrow	34	1S	75W	9900	7M18	C	Pyramid	26	41N	5W	10300
5K7	C	Lapland	16	2S	79W	9500	7M19	C	Spring Creek Pass	2	42N	3W	10900
6K8	C	Fremont Pass	3	8S	76W	11400	6M14	C	Pool Table Mt.	19	41N	2E	10000
6J6	C	Lynx Pass	10	1N	83W	9100	6M15	C	Lake Humphrey	32	40N	1E	9300
6K9	C	Shrine Pass	15	6S	79W	10500	6I6	C	Cochetopa Pass	12	45N	3E	10000
5K9	C	Grizzly Peak	2	5S	76W	11250	7M20	C	Porcupine	2	41N	3W	10400
6K20	C	Glen-Mar Ranch	31	2S	77W	8850	6M17	C	Wolf Creek Summit	6	37N	2E	11000
5J14	C	Monarch Lake	30	2N	74W	8500	<u>Rio Grande (New Mexico)</u>						
5J16	C	Granby	11	2N	77W	8700	5N1	NM	Red River	29	28N	15E	9500
5J19	C	Grand Lake	30	4N	75W	8600	5N2	NM	Taos Canyon	10	25N	15E	9000
5K14	C	Berthoud Summit	10	3S	75W	11300	5P1	NM	Aspen Grove	12	18N	10E	9100
5K15	C	Frazer View	34	2S	75W	10600	5N3	NM	Hematite Park	8	28N	15E	9500
6J11	C	Gore Pass	2	1N	82W	8900	5N4	NM	Tres Ritos	23	22N	13E	9000
6K13	C	Frisco	18	6S	78W	9300	6N1	NM	Payrole	16	28N	7E	9700
5K16	C	Snake River	9	5S	76W	9700	6N2	NM	Chama Divide	36,9N	106,7W		7750
6K14	C	Summit Ranch	8	4S	78W	10000	6N3	NM	Chamita	36,9N	106,7W		8500
5J24	C	Milner Pass	7	5N	75W	10100	5N5	NM	Cordova	28	22N	13E	10100
6K15	C	Vail Pass	28	5S	79W	10000	5P2	NM	Panchuela	27	19N	12E	8300
6K18	C	Kokomo	23	7S	79W	10600	5P3	NM	Big Tesuque	17	18N	11E	10000
6K19	C	Pando	10	7S	80W	9500	5P4	NM	Elk Cabin	8	17N	11E	8250
<u>Roaring Fork</u>							5P5	NM	Rio En Medio	8	18N	11E	10400
6K4	C	Ind. Pass Tunnel	20	11S	82W	10700	6P1	NM	Quemazon	34	20N	5E	9300
7K1	C	North Lost Trail	20	11S	87W	9200	6N4	NM	Bateman	5	26N	6E	9300
6K6	C	Nast	1	9S	83W	8700	6P2	NM	Fenton Hill	7	19N	3E	8900
6K10	C	Ivanhoe	12	9S	82W	10400							







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